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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/826,687	04/16/2004	David Leon	944-001.108-1	9596

4955 7590 11/15/2007  
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EXAMINER
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ALAM, UZMA

ART UNIT	PAPER NUMBER
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2157

MAIL DATE	DELIVERY MODE
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11/15/2007

PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

**Office Action Summary**

Application No.

10/826,687

Applicant(s)

LEON ET AL.

Examiner

Uzma Alam

Art Unit

2157

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 8/27/07.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-36 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-36 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 16 April 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date. \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_\_

### DETAILED ACTION

This action is responsive to the arguments filed August 27, 2007. Claims 1-36 are pending. Claims 1-36 represent a method for adaptively adjusting rate in a stream network.

#### *Claim Rejections - 35 USC § 102*

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

The changes made to 35 U.S.C. 102(e) by the American Inventors Protection Act of 1999 (AIPA) and the Intellectual Property and High Technology Technical Amendments Act of 2002 do not apply when the reference is a U.S. patent resulting directly or indirectly from an international application filed before November 29, 2000. Therefore, the prior art date of the reference is determined under 35 U.S.C. 102(e) prior to the amendment by the AIPA (pre-AIPA 35 U.S.C. 102(e)).

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

2. Claims 1-36 are rejected under 35 U.S.C. 102(e) as being anticipated by Bo et al. US Patent Publication No. 2004/0098748. Bo teaches the invention as claimed including a end to end bitrate based congestion control (see abstract).

As per claim 1, Bo teaches the method for adaptively controlling level of a receiver buffer in a client in a multimedia streaming network, the streaming network comprising a server for providing streaming data to the client, wherein the receiver buffer is used to compensate for difference between data transmission amount by the server and data usage amount by the client so as to allow the client to have sufficient amount of streaming data to play-out in a non-disruptive manner, said method comprising:

defining in the client [12] at least one parameter [network condition 27] for determining a rate adaptation operating range so as to carry out rate adaptation between the server [11] and the client (the parameter is the network condition; pp 0060, 0092-00950110);

adapting in the server the data amount to a reception rate based on said at least one parameter (rate adaptive encoder 23; pp 0061, 0063, 0106); and

adjusting in the client packet transfer delay variation based on said adapting (rate adaptation 12 and 27, pp 0073-0075).

As per claim 2, Bo teaches the method of claim 1, wherein said at least one parameter comprises a minimum shift amount indicative of a difference between a sampling time and a transmission time of a packet at the server so as to allow the server to carry out said adapting based on the minimum shift amount (pp 0107, 0110).

As per claim 3, Bo teaches the method of claim 1, wherein said at least one parameter comprises a target shift amount indicative of a shift amount greater than a difference between a sampling time and a transmission time of a packet at the server so as to allow the server to carry

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out said adapting based on the target shift amount (pp 0107, 0110).

As per claim 4, Bo teaches the method of claim 1, wherein said at least one parameter comprises a number specifying a maximum difference between the number of bytes that has been sent and the number of bytes that have been sampled so as to allow the server to carry out said adapting based on the number (pp 0107, 0110).

As per claim 5, Bo teaches the method of claim 1, further comprising the step of adapting a sampling rate to the transmission rate in the server based on said at least one parameter (network connection; pp 0092-0095).

As per claim 6, Bo teaches the method of claim 1, wherein said at least one parameter comprises a clock shift amount for preventing playout disruption in the client (pp 0114-0116, 0128-0135).

As per claim 7, Bo teaches the method of claim 1, wherein said adapting comprises an adjustment of a transmission rate (pp 0112).

As per claim 8, Bo teaches the method of claim 1, wherein said adapting comprises an adjustment of a sampling rate (pp 0195, 0194).

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As per claim 9, Bo teaches the method of claim 1, wherein said adapting comprises an adjustment of both a transmission rate and a sampling rate (pp 0112, 0194, 0195).

As per claim 10, Bo teaches the method of claim 1, wherein said at least one parameter comprises:

a minimum shift amount indicative of a difference between a sampling time and a transmission time of a packet at the server (pp0107, 0110);

a target shift amount indicative of a shift amount greater than a difference between a sampling time and a transmission time of a packet at the server (pp 0107; 0110);

a number specifying a maximum difference between the number of bytes that has been sent and the number of bytes that have been sampled (pp 0195, 0194); and

a clock shift amount, and wherein two or more of the minimum shift amount, the target shift amount, the specifying number and the clock are sent together to the server (pp 0114-0116; 0128-0135).

Claims 11-20, 21-25, 26-31 and 32-36 are rejected under the same rationale as claims 1-10 because they disclose a system, software code, terminal and network element employing the method of claims 1-10.

### ***Response to Arguments***

3. Applicant's arguments filed August 27, 2007 have been fully considered but they are not persuasive. The Office notes the following arguments filed:

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a. The reference Bo fails to disclose adapting in the server the data amount to a reception rate based on said at least on parameter.

In response to (a), Bo teaches that the streaming server has a bitrate adaptation protocol to allow the streaming server to receive feedback information from the client and make a decision on bitrate control. See paragraph 0091. The feedback information is the parameter that the reception rate is based on.

b. Bo fails to disclose defining in the client at least one parameter for determining rate adaptation operating range.

In response to (b), the buffer in the client checks whether it is necessary to retransmit a GOV or not. See paragraphs 0102-0104. The bitrate control information is also defined in the client as taught in paragraph 0106. The bitrate adapter module makes a decision on the bitrate adjustment based on the bitrate control information.

c. Bo does not disclose sending a parameter indicative of the network condition to the server.

In response to applicant's argument (c) that the references fail to show certain features of applicant's invention, it is noted that the features upon which applicant relies (i.e., sending a parameter indicative of the network condition to the server) are not recited in the rejected claim(s). Although the claims are interpreted in light of the specification, limitations from the specification are not read into the claims. See *In re Van Geuns*, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993). The claim does not recite sending a parameter indicative of the network condition to the server. The claim discloses rate adaptation between the server and the client.

- d. Bo fails to disclose adjusting in the client packet transfer delay variation.

In response to (d), Bo teaches that the bitrate adapter module implements the bitrate adaption protocol. See paragraph 0065. The bitrate adapter module in the client and that in the streaming server are counterparts with respect to each other. The bitrate adapter module uses control information to adjust the transmission rate.

- e. Bo fails to disclose that the parameter comprises a minimum shift amount indicative of a difference between a sampling time and a transmission time of a packet at the server.

In response to (e), Bo teaches adjusting the rate based on the timer. See paragraphs 0120-0124, 0194, 0203 and 0257. The timer is used to calculate at what time and what time delay the packet should be sent. The timer is used to adjust the data.

- f. Bo fails to disclose that the parameter comprises a target shift amount indicative of a shift amount greater than a difference between a sampling time and a transmission time of a packet at the server.

In response to (f), Bo teaches that a in response to the calculated RTP packet duaration, a push timer is set. The timer triggers an extended packets, see paragraph 0014. The server dispatches packets at intervals decided by msec timer according to the Gov bitrate. The msec timer is provided by the push timer. The push timer is the transmission time and the msec timer is the shift amount.

- g. Bo fails to disclose that the parameter comprises a number specifying a maximum difference between the number of bytes that has been sent and the number of bytes that have been sampled.



In response to (g), the control information of the Govs is received in response to the data link buffer. See paragraphs 0102-0105. The data link buffer generates retransmission requests in accordance with the results of which bytes were received and which were not.

h. Bo fails to disclose adapting a sampling rate to the transmission rate in the server based on the parameter.

In response to (h), Bo teaches the bitrate adaptation monitor negotiates the adaptation in the server, see paragraph 0107. The adaptation is performed based on the feedback information, which is the parameter, sent to server.

i. Bo fails to disclose that the parameter comprises a clock shift amount for preventing playout disruption in the client.

In response to (i), Bo teaches bitrate adaptation to prevent client delay in processing the GOV, see paragraphs 0198-0204. The retransmission time and bitrate are calculated based on the received GOVs so that the client does not see any delay in processing the GOVs.

j. Bo fails to disclose that the adapting comprises an adjustment of a sampling rate.

In response to (j), Bo teaches the used of a polling timer, or sampling rate. See paragraph 0257. The bitrate adapter module makes a decision about bitrate control in response to the calculated packet loss. When the result of the decision indicates that the bitrate should be changed, the bitrate adapter module generates a corresponding bitrate change request. The bitrate adapter module passes the acknowledgement to the bitrate adapter modules in the client and resets the polling timer, adjusting the sampling rate.

*Conclusion*

4. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Uzma Alam whose telephone number is (571) 272-3995. The examiner can normally be reached on Monday-Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ario Etienne can be reached on (571) 272-4001. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

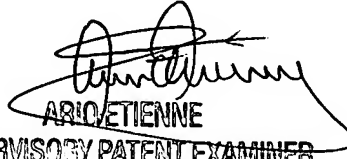
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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Uzma Alam

Ua

November 8, 2007

  
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